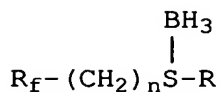


**IN THE CLAIMS:**

1. (Original) A fluorous borane-sulfide having a structure



wherein  $\text{R}_f$  is a fluorinated hydrocarbon chain containing one to twelve carbon atoms; R is  $\text{C}_{1-4}$ alkyl or  $(\text{CH}_2)_n\text{R}_f$ ; and n is 1 to 3.

2. (Original) The borane-sulfide of claim 1 wherein  $\text{R}_f$  contains four to ten carbon atoms.

3. (Original) The borane-sulfide of claim 1 wherein  $\text{R}_f$  contains six to eight carbon atoms.

4. (Original) The borane-sulfide of claim 1 wherein  $\text{R}_f$  is perfluorinated.

5. (Currently amended) The borane-sulfide of claim 1 ~~containing at least 35%, by weight of~~ wherein the fluorous sulfide,  $\text{R}_f - (\text{CH}_2)_n \text{S} - \text{R}$  contains at least 35%, by weight, fluorine.

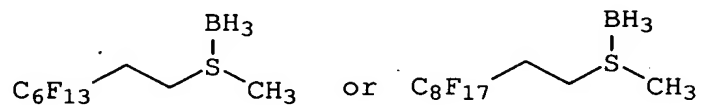
6. (Currently amended) The borane-sulfide of claim 1 ~~containing at least 35% to about 70%, by weight of~~ wherein the fluorous sulfide,  $\text{R}_f - (\text{CH}_2)_n \text{S} - \text{R}$  contains at least 35% to about 70%, by weight, fluorine.

7. (Original) The borane-sulfide of claim 1 wherein R is methyl or ethyl.

8. (Original) The borane-sulfide of claim 1 wherein n is 2.

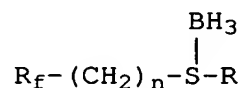
9. (Original) The borane-sulfide of claim 1 wherein  $R_f$  is  $C_6F_{13}$  or  $C_8F_{17}$ .

10. (Original) The borane-sulfide of claim 1 having a structure



11. (Cancelled)

12. (Original) A method of hydroborating an alkene or an alkyne comprising reacting the alkene or alkyne with a fluorous borane-sulfide having a structure



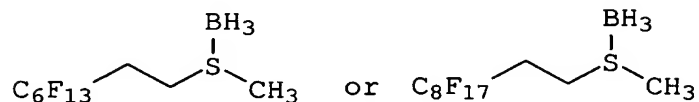
wherein  $\text{R}_f$  is a fluorinated hydrocarbon chain containing one to twelve carbon atoms; R is  $\text{C}_{1-4}$ alkyl or  $(\text{CH}_2)_n-\text{R}_f$ ; and n is 1 to 3.

13. (Original) The method of claim 12 wherein the hydroboration is performed in the presence of a fluorous sulfide having a structure  $\text{R}_f-(\text{CH}_2)_n-\text{S}-\text{R}$ , wherein  $\text{R}_f$  is a fluorinated hydrocarbon chain containing one to twelve carbon atoms; R is  $\text{C}_{1-4}$ alkyl or  $(\text{CH}_2)_n-\text{R}_f$ ; and n is 1 to 3.

14. (Original) The method of claim 12 wherein  $\text{R}_f$  is perfluorinated.

15. (Original) The method of claim 12 wherein  $\text{R}_f$  is  $\text{C}_6\text{F}_{13}$  or  $\text{C}_8\text{F}_{17}$ .

16. (Original) The method of claim 12 wherein the fluorous borane-sulfide is

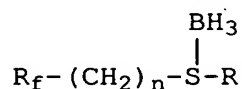


17. (Original) The method of claim 12 wherein the hydroboration is performed in a solvent comprising a fluorinated hydrocarbon.

18. (Original) The method of claim 17 wherein the solvent further comprises a second solvent that is immiscible with the fluorinated hydrocarbon.

19. (Original) The method of claim 17 wherein the fluorinated hydrocarbon is selected from the group consisting of perfluorohexane, perfluoroheptane, perfluorooctane, perfluorononane, perfluorocyclohexane, perfluoromethylcyclohexane, perfluoro-1,2-dimethylcyclohexane, perfluoro-1,3-dimethylcyclohexane, cis-perfluorodecalin, trans-perfluorodecalin, perfluorokerosene, perfluoromethyldecalin, and mixtures thereof.

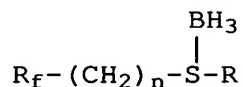
20. (Original) The method of claim 12 comprising further steps wherein a sulfide by-product of the hydroboration reaction having a formula  $R_f(CH_2)_n-S-R$  is separated from the reaction mixture, then reacted with  $BH_3$  to regenerate



21. (Currently amended) The method of claim 12 comprising further steps wherein ~~a product of the hydroboration reaction~~ the hydroborated alkene or alkyne is treated with a base and an oxidizing agent to provide an alcohol corresponding to the alkene or alkyne.

22. (Currently amended) The method of claim ~~18~~ 21 wherein the oxidizing agent is hydrogen peroxide.

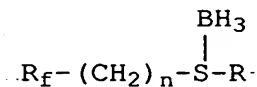
23. (Currently amended) A method of reducing ~~an~~ a reducible organic functionality of a compound comprising reacting the functionality with a fluorous borane-sulfide having a structure



wherein  $R_f$  is a fluorinated hydrocarbon chain containing one to twelve carbon atoms;  $R$  is  $C_{1-4}$ alkyl or  $(CH_2)_n-R_f$ ; and  $n$  is 1 to 3.

24. (Original) The method of claim 23 wherein the organic functionality is selected from the group consisting of cyano, amido, acyloxy, and keto.

25. (Original) The method of claim 23 comprising further steps wherein a fluorous sulfide by-product of the reduction having a formula  $R_f-(CH_2)_n-S-R$  is separated from the reaction mixture, then reacted with  $BH_3$  to regenerate



26. (Cancelled)